

ABSTRACT

To render a gear arrangement for a transmission as quiet as possible but nevertheless able to handle heavy loads, a first gear (1) made of a first material and a second gear (2) made of a second material sit loosely next to one another on a common shaft (4). The elasticity of the first gear (1), preferably made of plastic, is chosen to be greater than that of the second gear (2), preferably made of metal, while the strength of the second gear (2) is chosen to be greater than that of the first gear (1).
Because the second gear (2) preferably exhibits a slightly smaller toothing than the first gear (1), only the first gear (1), while having the same modulus, comes into engagement with another gear in normal operation. As the load increases, the first gear (1) made of plastic yields in the elastic range so that now the second gear (2) made of metal also comes into engagement in order to accept the forces occurring and thereby protect the first gear (1) against overloading and fracture. The gear arrangement is generally suitable for transmissions, for example for planetary transmissions.